

16885 U.S. PTO  
012304

# UTILITY PATENT APPLICATION TRANSMITTAL

Only for new nonprovisional applications under 37 CFR 1.53(b)

Attorney Docket No. 013921-000026

First Inventor Gehrke, Th mas

Title

PENDEOEPIITAXIAL METHODS OF  
FABRICATING GALLIUM NITRIDE  
SEMICONDUCTOR LAYERS ON SAPPHIRE  
SUBSTRATES, AND GALLIUM NITRIDE  
SEMICONDUCTOR STRUCTURES  
FABRICATED THEREBY

Express Mail Label No.

EL 991559335 US

## APPLICATION ELEMENTS

SEE MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages: 24]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets: 11]
5. Oath or Declaration [Total Sheets: 4]
  - a. ☐ Newly executed (original or copy)
  - b. ☒ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
  - i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s)  
Named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b)
6. ☐ Application Data Sheet. See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - a. ☐ Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i. ☐ CD-ROM or CD-R (2 copies); or
    - ii. ☐ paper
  - c. ☐ Statements verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & documents(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure ☐ Copies of IDS Citations  
Statement (IDS)/PTO-1449
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: \_\_\_\_\_

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☒ Continuation of prior application No.: 10/404,616, filed 4/1/03, which is a continuation of Ser. No. 09/899,586 filed 7/3/01, which is a divisional of 09/441,753 filed 11/17/99 now issued Patent No. 6,521,514 Prior application information: Examiner: A, Sarkar Art Unit: 2829

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 19. CORRESPONDENCE ADDRESS

<input checked="" type="checkbox"/> Customer Number	24,239				OR <input type="checkbox"/> Correspondence address below
Name	MOORE & VAN ALLEN				
Address	2200 West Main Street, Suite 800				
City	Durham	State	NC	Zip Code	27705
Country	US	Telephone	919-286-8000	Fax	919-286-8199
Name (Print/Type)	Steven B. Phillips		Registration No. (Attorney/Agent)	37,911	
Signature	<i>Dr B Phillips</i>			Date	1/23/04

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

17497 U.S. PTO  
10/763588

012304

16085  
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012304

# FEE TRANSMITTAL for FY 2003

Patent fees are subject to annual revision.

## Complete if Known

Application Number  
Filing Date  
First Named Inventor Gehrke, Thomas  
Examiner Name  
Group Art Unit  
Attorney Docket No. 013921-000026

TOTAL AMOUNT OF PAYMENT (\$1,422.00)

## METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit Card ☐ Money Order ☐ Other ☐ None

### Deposit Account:

Deposit Account Number 13-4365

Deposit Account Name

### The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments  
☒ Charge any additional fee(s) during the pendency of this application  
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
101	750	201	375	Utility filing fee	750.00
106	330	206	165	Design filing fee	
107	520	207	260	Plant filing fee	
108	750	208	375	Reissue filing fee	
114	160	214	80	Provisional filing fee	
SUBTOTAL(1)					(\$750.00)

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
48	-20**= 28	18	504
Independent 5	-3**= 2	84	168
Claims			672.00
Multiple Dependent			

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
103	18	203	9	Claims in excess of 20	
102	84	202	42	Independent claims in excess of 3	
104	280	204	140	Multiple dependent claims, if not paid	
109	84	209	42	** Reissue independent claims over original patent	
110	18	210	9	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL(2)					(\$894.00)

\*\*or number previously paid, if greater, For Reissues, see above

## FEE CALCULATION (continued)


### 3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,250	147	2,250	For filing a request for <i>ex parte</i> reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Processing fee under 37 CFR 1.17(q)	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	
Other fee (specify)					
SUBTOTAL(3)					(\$)

\* Reduced by Basic Filing Fee Paid

## SUBMITTED BY

## Complete (if applicable)

Name (Print Type) (Attorney/Agent)	Steven B. Phillips	Registration No. 37,911	Telephone 919-286-8000
Signature		Date	January 23, 2004

**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Burden Hour Statement; This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 200231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 200231.

**EXPRESS MAIL CERTIFICATE**

EXPRESS MAIL LABEL NUMBER: EL991559335 US

Date of Deposit: January 23, 2004

First Named Inventor: Gehrke, Thomas et al.

For: PENDEOEPIITAXIAL METHODS OF FABRICATING GALLIUM NITRIDE  
SEMICONDUCTOR LAYERS ON SAPPHIRE SUBSTRATES, AND GALLIUM NITRIDE  
SEMICONDUCTOR STRUCTURES FABRICATED THEREBY

I hereby certify that the following documents:

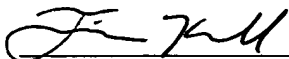
Express Mail Certificate; and

1. PTO SB/05 - Application Transmittal (for Continuation)
2. PTO SB/17 - Fee Transmittal
3. 14 pgs of specs., 48 claims, Abstract, 11 sheets of drawings (Figs. 1-22)
4. Copy of 4 pg Declaration from parent application
5. Information Disclosure Statement
6. Check in the amount of \$1,422.00
7. Acknowledgement Postcard

are being deposited in a single envelope with the United States Postal Services "Express Mail" service under 37 C.F.R. 1.10 on the date indicated above and such envelope is addressed to:  
Mail Stop: Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Tim Kroll

(Name of Person Mailing Documents)



(Signature of Person Mailing Documents)